

DEPARTMENT OF ENVIRONMENTAL QUALITY
Environmental Assessment

TECHNICAL AND FINANCIAL ASSISTANCE BUREAU
CLEAN WATER STATE REVOLVING FUND PROGRAM

EQ Number & Name of Project: Crow Agency Phase 2 Wastewater Improvements

Location of Project: Montana (Sec. 1, T3S, R34E and Sec. 6, T3S, R35E)

Community: Crow Agency

County: Big Horn

Description of Project:

- | | |
|--|--|
| <input type="checkbox"/> New Well | <input type="checkbox"/> New subsurface wastewater system |
| <input type="checkbox"/> New Water Treatment Process | <input type="checkbox"/> New above-ground wastewater system |
| <input type="checkbox"/> Water System Modification | <input checked="" type="checkbox"/> Wastewater System Modification |
| <input type="checkbox"/> Water Main Extension | <input checked="" type="checkbox"/> Sewer Main Extension |
| <input checked="" type="checkbox"/> Other: Master Lift Station | |

The proposed project consists of approximately 2,178 lineal feet of 21-inch gravity interceptor sewer; a master lift station; a membrane-lined, four-cell, aerated lagoon system; and approximately 992 lineal feet of 18-inch outfall sewer to serve the community of Crow Agency.

Agency Action:

Plan Review and approval for the above-mentioned project.

Other Agency Approvals: None

- | | |
|--|--|
| <input type="checkbox"/> DNRC Water rights | <input type="checkbox"/> DEQ Subdivision Review |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> DEQ Wastewater Discharge Permit |

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	N - The Natural Resource Conservation Service (NRCS) identified Haverson, Kyle, and Lohmiller as the soils series present within the proposed project site. These soils are composed of loams and clays, resulting in slow to moderately slow permeability. No severe limitations are noted for lagoons on these soils, as long as high groundwater, flooding, and steeper slopes are not present. According to the 2004 Preliminary Engineering Report (PER), depth to groundwater is at least 7 feet. A FEMA floodplain map is not available for this area; however, the Uniform Environmental Checklist states that the lagoon is to be constructed above the 1977 flood elevation. The proposed site is relatively flat. The PER did not identify any potential for subsidence or seismic activity. (Note: The proposed lagoon cells have already been excavated.)

IMPACTS ON THE PHYSICAL ENVIRONMENT

2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	N - There will be a new discharge point to the Little Bighorn River from the new lagoon system. Since the Little Bighorn River is on tribal lands in the project area, Montana water quality regulations do not apply. The existing National Pollutant Discharge Elimination System (NPDES) permit expires on August 16, 2009. The upcoming expiration date, construction of the new lagoon, and relocation of the discharge point, require that a new NPDES permit be issued this year. The treated effluent is expected to meet requirements of the NPDES permit. The proposed lagoon cells will be lined, thereby minimizing leakage of the lagoons to groundwater.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	N - The Crow reservation has a Class 2 airshed which is regulated by the EPA. During construction, there will be temporary dust problems. This issue will be mitigated by watering of the area.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	N - The proposed project site was cultivated grassland that was recently purchased by the Crow Tribe. This vegetation has already been disturbed since excavation of the lagoon cells is essentially complete. Additional cultivated area and some riparian zone will be temporarily disturbed during construction of the interceptor and outfall sewers. Construction specifications will require reclamation of these areas.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	N - Riparian habitat is located along the bank of the Little Bighorn River in the project area. Trees, shrubs and grasses along the bank provide habitat for a variety of wildlife. The western bank of the river, where the outfall will be located, is unstable and slowly eroding. Disturbance of the riparian area will be limited to installation of the proposed outfall structure. This area will be reclaimed after construction.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	N - The Army Corps of Engineers requires a delineation of wetlands and a permit if those wetlands are impacted by the project. There are no known biological resources of significance or endangered species within the project area, according to the PER. The US Fish and Wildlife Service indicated no significant impacts to fish or wildlife, or habitat resources under their purview and the Montana Fish, Wildlife, and Parks Department indicated no significant impacts to terrestrial game species. Habitats disrupted during construction will be reclaimed.
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	N - A field survey of the proposed project site was completed by the Little Big Horn College Cultural Resource Office in July 2006. No significant surface artifacts were found and no further investigation was recommended.
8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	N - The new lagoon site is in a flat area to the north of Crow Agency. All pumps and blowers will be housed in structures to minimize noise.
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? Will new or upgraded powerline or other energy source be needed?	N - Approximately 12 acres of agricultural land has been converted to lagoon cells. A new lift station will be installed at the new lagoon site; however energy use should not vary much from that required at the existing lagoon's lift station. A new power drop will be required at the site of the new lift station.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	N - There are no nearby activities that will affect the project. The project site is located along an existing rural, residential road.

IMPACTS ON THE HUMAN ENVIRONMENT	
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	N -The new aerated lagoon will produce a higher quality effluent than the old lagoon. This will help to keep the Little Bighorn River safer and healthier for downstream users.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	N - Approximately 12 acres of land was taken out of production to accommodate the lagoon site. This will be offset by reclamation of the existing lagoon into parkland or a fishing access site. Extra capacity in the new wastewater treatment lagoon would accommodate future commercial growth.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	N - During construction of the wastewater treatment system improvements, a few new and temporary jobs will be created. Excess capacity in the new lagoon system would accommodate commercial growth in the area and the creation of new jobs.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	N - The proposed project would allow for connection of more wastewater service connections and therefore generation of more wastewater fees. The project is not expected to result in any significant tax impacts.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	N - No additional government services will be required as a result of the new lagoon. There will be heavy equipment traveling on the local road to the new lagoon site during construction. Once the lagoon is in use, there may be a daily trip to the lagoon site by the operator for operation and maintenance purposes.
16. LOCALLY ADOPTED PLANS AND GOALS (ENVIRONMENTAL): Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	N - The proposed project is located on lands owned by the Crow Tribe. Tribal and federal laws govern activities within tribal lands.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	N - There are no wilderness areas in the vicinity of the project. The twelve acres on which the new lagoon is situated were previously cultivated. The new lagoon cells will be fenced to restrict public access. The old lagoon site in a low area along the Little Bighorn River could be reclaimed and converted to a tribal park or fishing access site.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	N - The proposed new wastewater treatment facility was designed to allow for moderate growth within the community.
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	N - Replacement of the old lagoon system with a new, improved wastewater treatment facility will not affect social structures and mores.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	N - The proposed new lagoon will not affect cultural uniqueness and diversity on the reservation.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	N - The proposed new lagoon will not affect social and economic circumstances.
22(a). PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	N - The land on which the new wastewater improvements are proposed was recently purchased by the tribe for the purpose of constructing these improvements.

23. Summary of Magnitude and Significance of Potential Impacts: *No significant impacts are applicable to the action being reviewed by the Wastewater State Revolving Fund Program.*
24. Cumulative Effects: *The proposed project will have no significant adverse cumulative effects on resources, ecosystems, or human communities.*
25. Preferred Action Alternative and Rationale: *The 2004 PER re-evaluated the aerated and oxidation ditch alternatives from the 2003 PER and also considered a third sequencing batch reactor (SBR) alternative. The no-action alternative was eliminated in the 2003 PER and was not reconsidered in the 2004 PER. Because no future stringent NPDES permit limits requiring nutrient removal are expected for Crow Agency, a more advanced wastewater treatment system is unnecessary. A four-cell, lined, aerated lagoon was the selected alternative since it is the most cost-effective alternative in terms of both capital and operation and maintenance costs and can easily meet current and expected NPDES permit requirements.*

Recommendation for Further Environmental Analysis:

☐ EIS ☐ More Detailed EA ☒ No Further Analysis

Rationale for Recommendation: Through the 2004 Preliminary Engineering Report for Crow Agency Wastewater Facility Improvements prepared by Morrison-Maierle, Inc. and the public process involved, Crow Agency determined that the replacement of the existing lagoon and master lift station will improve the operation and maintenance capabilities of the system. Through this EA checklist, the MDEQ has verified that none of the adverse impacts of the wastewater facility improvements project are significant; therefore, an environmental impact statement is not required. The environmental review was conducted in accordance with the Administrative Rules (ARMs) of Montana 17.4.607, 17.4.608, 17.4.609 and 17.4.610. This EA is the appropriate level of analysis because none of the adverse impacts are significant. Based on an EA prepared in September 2008, a Finding of No Significant Impact (FONSI) was prepared by the United States Environmental Protection Agency on November 5, 2008 and published on November 20, 2008. The Montana Department of Commerce Community Development Block Grant Program prepared a FONSI for publication on December 18, 2008. This EA checklist will be advertised on our MDEQ website. Comments regarding the project will be received for 30 days before final approval is granted.

EA Checklist Prepared By:

Michele Marsh, PE

March 9, 2009
Date

EA Checklist Approved By:

Mike Abrahamson, PE

March 9, 2009
Date